

a procedure similar to the wind factor approach is employed to estimate the surface drift current. The factor most often used has a value of 56%. Many models are structured to utilize information on currents as obtained from prototype measurements or from estimates obtained from circulation submodels. The circulation submodels are often major components in the oil spill transport prediction procedures.

The numerical circulation submodels are not true three-dimensional models; rather they are two-dimensional representations obtained by making certain simplifications. Among others, these simplifications include the averaging (in the vertical) of the component velocities. This averaging presents some difficulty in estimating the surface currents especially in regions where the wind and tide are the dominant contributors to the circulation pattern. Another difficulty is related to the model boundaries especially where there is an interface with major large scale circulations systems such as the Norwegian current or the Gulf Stream. With the exception of SLIKTRAK, none of the models attempt to model the large scale circulation pattern. SLIKTRAK attempts to model the effect of the Norwegian current by providing for acceptance of predicted values of velocities (presumably obtained from another submodel) at the model boundaries.